

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
CHARLESTON DIVISION

B.P.J, by her next friend and mother,
HEATHER JACKSON

Plaintiff,

v.

WEST VIRGINIA STATE BOARD OF
EDUCATION, HARRISON COUNTY BOARD
OF EDUCATION, WEST VIRGINIA
SECONDARY SCHOOL ACTIVITIES
COMMISSION, W. CLAYTON BURCH in his
official capacity as State Superintendent,
DORA STUTLER in her official capacity as
Harrison County Superintendent, and THE
STATE OF WEST VIRGINIA

Defendants

and

LAINEY ARMISTEAD

Defendant-Intervenor.

Case No. 2:21-cv-00316

Hon. Joseph R. Goodwin

STATE OF WEST VIRGINIA AND DEFENDANT-INTERVENOR LAINEY ARMISTEAD'S
JOINT MOTION TO SUPPLEMENT THE EXPERT REPORT OF DR. GREGORY A. BROWN

INTRODUCTION

The scientific evidence that male performance advantage in athletics is substantial and durable—with or without testosterone suppression or puberty blockers—is even clearer today than it was when Dr. Gregory Brown produced his expert report in February 2022. In the intervening months, the peer-reviewed literature has increased, and athletic organizations across the globe have adjusted their policies to more closely follow the available science.

In the interest of providing the factfinder with up-to-date information on the physiology of sex-based performance difference, Dr. Brown should be permitted to present this new evidence and discuss how it affects his expert opinions at trial. Thus, the State of West Virginia and Defendant-Intervenor Lainey Armistead (Defendants) move for leave to produce a brief supplemental expert report discussing these new developments, a copy of which is attached as Exhibit A.

Leave should be granted because the supplemental information is relevant to Dr. Brown’s opinions and was not available at the time of his initial report. Further, no one will be prejudiced, as there is ample time before trial for Plaintiffs to depose Dr. Brown on the supplemental report if they so desire. Allowing Defendants to supplement Dr. Brown’s report will give the factfinder the best available information to understand how biological sex affects athletic performance, and how sex-based separation in athletics substantially advances the State’s important interest in providing equal athletic opportunities for women.

SUMMARY OF THE SUPPLEMENTAL REPORT

In his expert report, Dr. Brown, a tenured professor of exercise science and well-published researcher, set forth scientific evidence that biological males have substantial physiology-based athletic performance advantages over biological females. Brown Rep. ¶¶ 7–67, ECF No. 317-2. He further demonstrated that, while these physiology-based differences increase during puberty, they exist before

puberty, as shown in multiple peer-reviewed studies and fitness data from hundreds of thousands of children. *Id.* ¶¶ 71–113. He also presented evidence that suppressing testosterone after puberty has begun does not eliminate male athletic advantages, as some researchers had previously hypothesized. *Id.* ¶¶ 125–57. And he documented the evolution of global athletic policies to take account of this evidence. *Id.* ¶¶ 158–177. He further noted that there is no evidence that prescribing puberty blockers before the onset of puberty “eliminates the pre-existing performance advantages that prepubertal males have over prepubertal females.” *Id.* ¶ 113.

Since finalizing his expert report in February 2022, Dr. Brown has become aware of three peer-reviewed studies—all published after his report was produced—that bear on the evidence presented.

First, a study published by Dr. Lidewij Boogers et al. in June 2022 provides evidence that puberty blockers and cross-sex hormones do *not* affect adult height. Brown Supp. Rep. ¶¶ 1–4. In other words, male children who received puberty blockers followed by estrogen hormones can be expected to reach the same (male) height they would have reached in the absence of such interventions. *Id.* This finding matters because the height differential between males and females is an important source of male athletic advantage, and the new study suggests that advantage is unaffected by a standard course of puberty suppression followed by cross-sex hormones.

Second, a literature review published by Dr. Alison Heather in July 2022 on testosterone suppression in male athletes who identify as female concluded that the available scientific evidence fails to demonstrate that testosterone suppression eliminates male athletic advantage. Brown Supp. Rep. ¶¶ 5–7. This review shows that Dr. Brown’s expert opinion on the minimal effects of testosterone suppression

on athletic performance is mainstream in the peer-reviewed literature and deserves to be given weight.

Third, a cross-sectional study published earlier this month by Dr. Leonardo Alvarez et al. provides evidence that 14+ years of testosterone suppression is insufficient to eliminate male advantage in cardio-respiratory endurance, which is relevant to endurance events like running, cycling, and swimming. Brown Supp. Rep. ¶¶ 8–11. This study further supports Dr. Brown’s opinion that there is no course of testosterone suppression proven to eliminate male performance advantage.

In addition, since the production of Dr. Brown’s report, athletic organizations have continued to adjust their policies based on increasing evidence that testosterone suppression does not eliminate male performance advantage. Dr. Brown is aware of new national or international policies in aquatics, rugby, triathlon, cycling, and boxing. Brown Supp. Rep. ¶¶ 12–28. While these policies are not uniform, all of them account for the emerging scientific consensus that there is not a regimen of testosterone suppression proven to eliminate male athletic advantage. This evolution in the athletic community towards greater awareness of the science lends weight to Dr. Brown’s opinions and supports a finding that the Sports Act’s biological classification substantially advances the State’s interest in providing equal athletic opportunities for women.

LEGAL STANDARD

Rule 26(e)(1) of the Federal Rules of Civil Procedure requires parties to supplement an expert report “if the party learns that in some material respect the disclosure or response is incomplete.” Fed. R. Civ. P. 26(e)(1). Supplementation is permissible when “the supplemental information correspond[s] to a prior Rule 26(a) disclosure” and the supplemental information was not “available at the time set for the initial disclosure.” *In re C.R. Bard, Inc. Pelvic Repair Sys. Prods. Liab. Litig.*,

2:14-cv-02528, 2017 WL 4248809, at *2 (S.D.W. Va. Sept. 25, 2017) (cleaned up).

Further, supplementation should be timely, based on the “availability of the supplemental information.” *Id.* (cleaned up). All three criteria are met here.

ARGUMENT

The proposed supplement (I) relates to the opinions expressed in Dr. Brown’s original report and (II) was not available at the time the report was published. Further, this supplement is (III) presented in a timely fashion with ample time for Plaintiffs to depose Dr. Brown on the supplement if they so desire. Therefore, Defendants’ motion for leave to supplement Dr. Brown’s report should be granted.

I. The Supplement Presents New Studies and Policies Directly Relevant to Dr. Brown’s Expert Opinions

The new studies and policies directly relate to, support, and supplement opinions in the original expert report. Specifically, the Boogers (2022) study on the effects of puberty suppression and cross-sex hormones on adult height helps fill the research gap identified in the original report. There, Dr. Brown noted that there was no published research on predicting final adult height for youths receiving puberty blockers followed by cross-sex hormones. Brown Rep. ¶ 113. Now, the Boogers study provides such evidence. And it is important for the factfinder to benefit from this new science. Brown Supp. Rep. ¶¶ 1–4.

Likewise, the Heather (2022) study addresses the effects of testosterone suppression on a variety of physiological components of athletic performance, such as brain structure, skeletal architecture, muscle structure, and the cardiorespiratory system. Dr. Brown’s report addressed these same topics. *See, e.g.*, Brown Rep. ¶¶ 129–33, 145–56, 162–66. The fact that another professional exercise physiologist considered much of the same data and came to the same conclusions as Dr. Brown—and successfully published those conclusions in a peer-reviewed journal—lends weight to Dr. Brown’s opinions.

Similarly, the Alvarez (2022) study provides new evidence that long-term testosterone suppression does not eliminate male advantage in cardiorespiratory endurance and helps fill a research gap identified in Dr. Brown’s report. Brown Rep. ¶ 151; Brown Supp. Rep. ¶¶ 8–11. It therefore supports Dr. Brown’s opinion that there is no course of testosterone suppression proven to eliminate male athletic advantage.

Finally, the new athletic policies supplement Dr. Brown’s discussion of the evolution of athletic policies to account for the emerging science. In his report, Dr. Brown identified new policies and analyses from World Rugby, the UK Sports Councils, the American Swimming Coaches Association, the NCAA, and USA Swimming. Brown Rep. ¶¶ 171–77. The proposed supplement demonstrates the continuing evolution of athletic policies to account for the lack of evidence that testosterone suppression eliminates male performance advantage. Brown Supp. Rep. ¶¶ 12–29.

In sum, the entirety of the proposed supplemental report “correspond[s] to a prior Rule 26(a) disclosure” and should therefore be allowed. *In re C.R. Bard*, 2017 WL 4248809, at *2 (quoting *Carillo v. B & J Andrews Enters., LLC*, No. 2:11-cv-01450-RCJ-CWH, 2013 WL 420401, at *4 (D. Nev. Jan. 31, 2013)).

II. The Supplement Presents Evidence Not Available When the Original Report Was Finalized and Produced

All of the new studies and athletics policies were published after Dr. Brown’s report was finalized and produced on February 23, 2022. And the vast majority were published well after the close of discovery on March 25, 2022. So these materials were not available to Dr. Brown at the time he finalized his report.

Supplementation of an expert report is appropriate—indeed, required—when the expert receives new information not available at the time of the initial report. *See, e.g., OmniSource Corp. v. Heat Wave Metal Processing, Inc.*, No. 5:13-cv-772-D,

2015 WL 3452918, at *10 (D. Md. May 29, 2015) (“Heat Wave’s supplement is proper because it is based on new information.”); *Kuklock v. Nev. Dep’t of Transp.*, No. 3:19-cv-00369-LRH-CLB, 2020 WL 7081582, at *2 (D. Nev. Dec. 2, 2020) (“New information . . . is the proper subject of supplementation.”). Accordingly, Dr. Brown’s proposed supplement is proper.

III. The Supplement Is Timely, and There Is Ample Time for a Deposition on its Contents

Expert reports need not be supplemented “as each new item of information is learned,” but rather in appropriate intervals with ample time for supplemental depositions before trial. *In re C.R. Bard*, 2017 WL 4248809, at *2 (citation omitted). And “Rule 26(e) does not limit the time for supplementation to the discovery period.” *Carillo*, 2013 WL 420401, at *4. Rather, Rule 26(e)(2) requires supplementation before the disclosure of Defendants’ Rule 26(a)(3) disclosures, which are not yet due. Thus, the proposed supplement is timely.

Moreover, the supplement is offered more than 100 days before trial with ample time for Plaintiffs to depose Dr. Brown on the new studies and policies.¹ Indeed, courts have often permitted parties to designate entirely new experts or have experts render wholly new opinions this far from trial. *See, e.g., Ferrara & DiMercurio v. St. Paul Mercury Ins. Co.*, 240 F.3d 1, 9–10 (1st Cir. 2001) (no prejudice from allowing designation of new expert three-and-a-half months before trial, even without a proper expert report); *Kanawha-Gauley Coal & Coke Co. v. Pittson Minerals Grp., Inc.*, No. 2:09-cv-01278, 2011 WL 320909, at *3 (S.D.W. Va. Jan. 28, 2011) (disclosure of new opinion nearly four months before trial harmless). Here, Dr. Brown’s supplement merely presents a few new articles and policies that are entirely in line

¹ Defendants will work with Plaintiffs’ counsel to make Dr. Brown available for a deposition on his supplemental report at a mutually agreeable time.

with his previously disclosed opinions. No prejudice arises from allowing Dr. Brown to report on and discuss this new evidence.

CONCLUSION

By providing the factfinder with “scientific, technical, or other specialized knowledge,” expert testimony promotes “[a]n intelligent evaluation of facts.” Fed. R. Evid. 702, Advisory Committee Notes. It follows that experts should provide the factfinder with the most up-to-date scientific knowledge available.

That is precisely what Dr. Brown asks to do in this case. Allowing him to supplement his expert report with the very latest scientific research and athletics policies will give the factfinder the best opportunity to understand the physiology of sex-based athletic advantage. Thus, the motion for leave to supplement his expert report should be granted.

Respectfully submitted this 21st day of October, 2022.

PATRICK MORRISEY
West Virginia Attorney General

/s/ Brandon S. Steele

Brandon Steele, WV Bar No. 12423
Joshua D. Brown, WV Bar No. 12652
The Law Offices of Brandon S. Steele
3049 Robert C. Byrd Drive, Suite 100
Beckley, WV 25801
(304) 253-1230
(304) 255-1520 Fax
bsteelelawoffice@gmail.com
joshua_brown05@hotmail.com

Jonathan Scruggs, AZ Bar No.
030505*

Roger G. Brooks, NC Bar No. 16317*
Henry W. Frampton, IV, SC Bar No.
75314*
Alliance Defending Freedom
15100 N. 90th Street
Scottsdale, AZ 85260
(480) 444-0020
(480) 444-0028 Fax
jscruggs@adflegal.org
rbrooks@adflegal.org
hframpton@adflegal.org

Christiana Holcomb, DC Bar No.

176922*
Alliance Defending Freedom
440 First Street NW, Suite 600
Washington, DC 20001
(202) 393-8690
(202) 347-3622 Fax
cholcomb@adflegal.org

/s/ Curtis R. A. Capehart

Douglas P. Buffington II (WV Bar # 8157)
Chief Deputy Attorney General
Curtis R.A. Capehart (WV Bar # 9876)
Deputy Attorney General
OFFICE OF THE WEST VIRGINIA ATTORNEY
GENERAL
State Capitol Complex
1900 Kanawha Blvd. E, Building 1, Room
E-26
Charleston, WV 25305-0220
Telephone: (304) 558-2021
Facsimile: (304) 558-0140
Email: curtis.r.a.capehart@wvago.gov

*Counsel for Defendant, STATE OF WEST
VIRGINIA*

(signatures continued on next page)

Tyson C. Langhofer, VA Bar No.
95204*

Rachel A. Csutoros, MA Bar No.
706225*

Alliance Defending Freedom
44180 Riverside Parkway
Lansdowne, VA 20176
(571) 707-2119
(571) 707-4790 Fax
tlanghofer@adflegal.org
rcsutoros@adflegal.org

Travis C. Barham, GA Bar No.
753251*

Alliance Defending Freedom
1000 Hurricane Shoals Road NE, Ste
D-1100
Lawrenceville, GA 30043
(770) 339-0774
(770) 339-0774 Fax
tbarham@adflegal.org

Timothy D. Ducar, AZ Bar No.
015307*

Law Offices of Timothy D. Ducar, PLC
7430 E. Butherus Drive, Suite E
Scottsdale, AZ 85260
(480) 502-2119
(480) 452-0900 Fax
tducar@azlawyers.com

**Visiting Attorneys
Attorneys for Defendant-Intervenor*

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CERTIFICATE OF SERVICE

I, Brandon Steele, hereby certify that on October 21, 2022, I electronically filed a true and exact copy of the foregoing with the Clerk of Court and all parties using the CM/ECF system.

/s/ Brandon S. Steele
Brandon Steele, WV Bar No. 12423
The Law Offices of Brandon S. Steele
3049 Robert C. Byrd Drive, Suite 100
Beckley, WV 25801
(304) 253-1230
(304) 255-1520 Fax
bsteelelawoffice@gmail.com

Attorney for Defendant-Intervenor